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**PETITION OF  
THE UTILITY SOLID WASTE ACTIVITIES GROUP,  
THE EDISON ELECTRIC INSTITUTE,  
THE AMERICAN PUBLIC POWER ASSOCIATION  
AND THE NATIONAL RURAL ELECTRIC COOPERATIVE  
ASSOCIATION**

**To Include  
MERCURY-CONTAINING EQUIPMENT  
In The Universal Waste Management Program,  
40 C.F.R. Part 273**

*submitted to*  
The United States  
Environmental Protection Agency

October 11, 1996

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**BEFORE THE  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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**Petition of the Utility Solid Waste  
Activities Group Under the Resource  
Conservation and Recovery Act to  
Add Mercury-Containing Equipment  
to 40 C.F.R. Part 273**

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To the Administrator:

Pursuant to section 7004(a) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6974(a), and 40 C.F.R. §§ 260.20, 260.23 and 273.80, the Utility Solid Waste Activities Group ("USWAG"), the Edison Electric Institute ("EEI"), the American Public Power Association ("APPA") and the National Rural Electric Cooperative Association ("NRECA") (collectively "USWAG") petition the Administrator of the United States Environmental Protection Agency ("EPA") to add "mercury-containing equipment" to the universal waste management program. 40 C.F.R. Part 273.

USWAG proposes that "mercury-containing equipment" includes "any device or instrument, with the exception of batteries and thermostats, that contains metallic mercury as a component necessary for its operation. Examples of such equipment include: thermometers, manometers, barometers, regulators, meters, gauges, switches, and relays."

Section I of this petition sets forth USWAG's statement of interest. Section II provides an overview of USWAG's request to add mercury-containing equipment to the

Part 273 program. Finally, Section III reviews the factors set forth in 40 C.F.R. § 273.81 for inclusion in the Part 273 program as applied individually to or mercury-containing equipment.

## **I. STATEMENT OF INTEREST**

USWAG is an informal consortium of EEI, APPA, NRECA and approximately 80 electric utility operating companies. EEI is the principal national association of investor owned electric power and light companies. APPA is the national association of publicly owned electric utilities. NRECA is the national association of rural electric cooperatives. Together, USWAG members represent more than 85 percent of the total electric generating capacity of the United States, and service more than 95 percent of the nation's consumers of electricity.

Beginning with its formation in 1978, USWAG has participated in virtually every major rulemaking under RCRA to assist EPA in developing a cost-effective and reasonable regulatory program that is protective of human health and the environment. USWAG members have a particular interest in the universal waste management program since many of the types of hazardous waste generated by the electric utility industry are produced in small volumes at a large number of geographically dispersed individual generation points that are spread out across large utility distribution networks. These generation points include generating stations, service centers, substations and transformer vaults. Some large electric utilities have potentially hundreds or thousands of individual generation points throughout their distribution network. In addition, utilities service meters, regulators and other mercury-containing equipment at numerous customer locations sometimes totaling over 1,000 customer sites per utility. Thus, instead of resembling the RCRA paradigm of a few sites generating large quantities of a limited number of wastestreams, many electric utilities generate wastestreams that

more closely resemble the widely-distributed, low volume production of wastes typical of smaller businesses or households. Therefore, the current subtitle C system, which is based on the model of large-scale industrial process wastes, creates great inefficiencies and over-regulation in the management of many electric utility wastes.

As a result, USWAG has strongly supported the Agency's development of the universal waste management program and the establishment of a streamlined regulatory system for "universal wastes" that are produced in relatively small volumes by a large number of generators at widely dispersed generation points. See USWAG Comments on Proposed Universal Waste Rule, May 12, 1993 (Docket No. F-93-SCSP-FFFFF). USWAG was disappointed, however, that the final universal waste rule was limited to only three waste types (i.e., hazardous waste batteries; recalled and canceled pesticides; and mercury-containing thermostats) and did not include a number of other qualified waste types identified by EPA in the proposed rule or suggested by the regulated community during the comment period.

Mercury-containing equipment is an especially appropriate candidate for inclusion in the universal waste program. EPA has already recognized the suitability of including mercury-containing thermostats in the final universal waste rule and indeed specifically stated in promulgating the final rule that the Agency "would welcome a petition to add some form of broad category of mercury-containing equipment to the universal waste rule." 60 Fed. Reg. 25492, 25508 (May 11, 1995) (emphasis added). This petition is in response to that invitation and is consistent with other EPA pronouncements suggesting that mercury-containing equipment would be a good candidate for inclusion in the universal waste system. See 58 Fed. Reg. 8102, 8109-8110 (Feb. 11, 1993); see also EPA letter dated July 29, 1994, from David Bussard, Characterization and Assessment Division to New York Gas Group, suggesting that



mercury-containing natural gas regulators would be good candidates for inclusion in the universal waste program (Attachment A).

Many of the same considerations that influenced EPA's decision to include mercury-containing thermostats in the universal waste program are equally applicable in the case of mercury-containing equipment. For example, in addition to thermostats, mercury-containing equipment includes a variety of other types of instruments that have been and are currently used throughout the electric utility industry, as well as by numerous other industries, municipalities and individual households. For the utility industry, mercury-containing equipment includes manometers, barometers, hagenmeters, relay switches, mercury wetted switches, mercury regulators, meters, temperature gauges, pressure relief gauges, water treatment pressure gauges, sprinkler system contacts, power plant water treatment gauges, and variable force counterweight wheels used in coal conveyer systems. See Attachment B as a representative estimate of the types and amounts of mercury-containing equipment present at a large combination gas and electric utility company (Attachment B provides an estimate of the mercury-containing equipment located throughout the representative electric utility, including power generating plants, field stations, service centers, and general office facilities). The types and amounts of mercury-containing equipment identified in Attachment B are typical of many electric utilities. The total estimated number of pieces of mercury-containing equipment (including small pieces of equipment such as regulators, relays and switches) disposed of annually by the electric utility depicted in Attachment B would range from approximately 500 - 1,000.

Due to the varied composition of this wastestream, and the sporadic frequency with which it is generated, the handling and disposal of mercury-containing equipment present a number of problems for generators that would be greatly alleviated by inclusion in the universal waste program. The current regulatory regime presents a

number of practical and regulatory dilemmas for the management of this waste type, including the prospect that electric utilities, municipalities and other entities will have to treat each location that produces this waste type as an individual RCRA generator. Such a result would be especially burdensome for the electric utility industry. Not only is there significant variation in the types of instrumentation, but the instruments are located at a number of different utility sites and facilities, including, for example, power plants, substations, service centers, gas plants/compressor stations, and office buildings.

Therefore, USWAG is petitioning EPA to add mercury-containing equipment to the Part 273 universal waste program because their inclusion in Part 273 will (1) improve the current management practices for these waste types and the implementation and overall rationality of the hazardous waste program, and (2) increase the likelihood that unregulated portions of this wastestream will be redirected to the Part 273 system, thereby removing these wastes from the municipal waste stream. See 60 Fed. Reg. at 25494. Moreover, as discussed in Section III of the Petition, mercury-containing equipment satisfies the factors set forth in 40 C.F.R. § 273.81 for inclusion in the Part 273 program. Upon review of these factors, it will be abundantly clear that, based on the weight of the evidence presented herein, inclusion of mercury-containing equipment in the Part 273 program is warranted because it will "improve management practices for the waste[s] . . . and will improve the implementation of the hazardous waste program." Id. at § 273.80(c).

## II. PROPOSED ACTION

USWAG petitions the Administrator to amend 40 C.F.R. Part 273 by adding mercury-containing equipment to the universal waste program. This wastestream

exhibits all of the characteristics which EPA has identified as the attributes shared by the waste types currently included in the universal waste system.

- Waste mercury-containing equipment are often RCRA hazardous wastes.
- Mercury-containing equipment are generated in small amounts on a sporadic basis at thousands of individual generation points representing a variety of different entities.
- Stewardship and management of mercury-containing equipment will be improved under the universal waste program.
- Accumulation and transportation of mercury-containing equipment under the Part 273 program will be protective of human health and the environment.
- Regulation of mercury-containing equipment under Part 273 will promote better compliance with the RCRA subtitle C program.
- Mercury-containing equipment currently is generated by a diverse array of parties in many different locations which poses implementation difficulties for both the regulatory community and the regulatory agencies charged with implementing the hazardous waste program.
- Mercury-containing equipment are present in significant volumes in non-hazardous waste management systems.

60 Fed. Reg. at 25493.

The addition of this wastestream to the Part 273 program will promote the express objectives of the universal waste program: improvement of management practices for the wastes and improvement of the implementation of the hazardous

waste program. *Id.* at 25511. By providing relief from the imposition of unnecessary and overly burdensome subtitle C requirements, generators will be able to accumulate sufficient quantities of this waste to facilitate their proper management and better disposal. Each of these points is discussed below.

**III. INCLUSION OF MERCURY-CONTAINING EQUIPMENT IN THE PART 273 PROGRAM WILL IMPROVE EXISTING WASTE MANAGEMENT PRACTICES AND THE OVERALL IMPLEMENTATION OF THE HAZARDOUS WASTE PROGRAMS**

Inclusion of mercury-containing equipment in the Part 273 program will create a more rational, cost-effective and environmentally sound management program for this wastestream under the RCRA system. The same rationale that led EPA to establish the Part 273 universal waste program and to include hazardous waste batteries, hazardous waste recalled pesticides and especially hazardous waste mercury-containing thermostats in that program applies with equal force here: the current RCRA Subtitle C regime creates an unwieldy, highly problematic and complicated regulatory morass for the generation, transportation and consolidation of mercury-containing equipment. This is attributable to the fact that the subtitle C regulatory system -- with the exception of the new Part 273 regulations -- is premised on the paradigm of large industrial establishments and is not designed to accommodate the attributes of "universal wastes" that are generated by a diverse community of generators at a multitude of locations and which are more readily suitable to a "simplified set of requirements set forth in the [universal waste] rule." *Id.* at 25502.

By streamlining the requirements applicable to the generation, transportation and consolidation of mercury-containing equipment, EPA will be achieving one of the fundamental goals of the universal waste program -- encouraging the collection of the wastestream and providing incentives for the collection of mercury-containing

equipment disposed of as municipal solid waste. There is no reason for delaying implementation of such a system when it can be readily implemented in a manner that is fully protective of human health and the environment.

EPA recognized in promulgating the Part 273 regulations that the most cost-effective and logical management strategy for hazardous wastes that are generated at widely dispersed locations is to consolidate the materials at a central location prior to off-site recycling or disposal. 58 Fed. Reg. at 8104. As the Agency is aware, the current regulatory regime makes this common sense approach highly impractical for "universal wastes" because it generally requires each individual generation point to (1) become a RCRA generator, which involves rendering a waste determination, obtaining an individual I.D. number and complying with a wide array of manifest and land disposal restriction ("LDR") requirements, and (2) transport its wastes directly to a permitted treatment, storage and disposal ("TSD") facility.

Because mercury-containing equipment often is generated in small volumes at a large number of separate locations, the designation of each separate location as a distinct generation facility from which the waste must be sent to a permitted TSD facility is highly impractical and counterproductive. Numerous logistical and administrative problems are associated with having to obtain individual generator identification numbers for potentially thousands of separate generation points. The requirements include: complying with associated manifest and generator recordkeeping requirements; complying with preparedness and prevention requirements; conducting sampling and analysis for hazardous waste determinations at potentially thousands of individual sites (in addition to maintaining records of such determinations); preparing and retaining annual facility waste generation reports; and complying with generator exception reporting obligations.

Significant resources also are required to comply with RCRA's LDR requirements. Generator land disposal documentation and certification forms also would have to be prepared for waste that is destined for land disposal. The burdens associated with performing these requirements at thousands of individual generation points are simply overwhelming and make full compliance with all Subtitle C requirements a daunting and cost prohibitive task. Compliance problems are particularly acute for waste resulting from a utility's operations on customer-owned property. It is extremely difficult to apply appropriate hazardous waste management standards to such operations. The inclusion of mercury-containing equipment within the universal waste system would eliminate many of these impractical and unnecessary requirements and greatly improve the implementation of the RCRA program for this particular wastestream.

For example, if mercury-containing equipment were included in the universal waste system, the thousands of individuals sites that generate these materials on a sporadic basis would not have to be designated as individual generation points and would not have to obtain individual EPA I.D. numbers or comply with a labyrinth of unnecessary RCRA subtitle C requirements. Rather, these sites would be subject to applicable Part 273 requirements as either "Small Quantity" or "Large Quantity Handlers" of universal waste. See 40 C.F.R. § 273.6; 60 Fed. Reg. at 2550. This approach will make tracking of the wastestream less complicated and allow waste handlers to transport qualified wastes to centralized locations for consolidation prior to off-site recycling or disposal, as opposed to sending numerous individual shipments directly to permitted TSD facilities. In addition, because many generation sites are conditionally exempt, the inclusion of mercury-containing equipment in the universal waste program will promote reclamation rather than disposal as an exempt waste.

Similarly, facilities accustomed to consolidating such equipment prior to off-site shipment to a "Destination Facility" also would be subject to appropriate "Small Quantity" or "Large Quantity Handler" requirements. Most importantly, such consolidation facilities would not be required to obtain full RCRA permits, which as noted above, has historically precluded entities from engaging in these common sense consolidation practices. See 60 Fed. Reg. at 25501-25502. Consolidation activities will promote the development of more cost-effective waste management options for mercury-containing equipment.

In short, the inclusion of mercury-containing equipment in the Part 273 program will (1) improve existing management practices for the wastes by streamlining and simplifying the accumulation and transportation requirements for these widely dispersed wastetypes, and (2) improve the overall implementation of the hazardous waste program; and (3) promote recycling of mercury waste. These issues are discussed in more detail below with regard to the evaluation criteria under 40 C.F.R. § 273.81.

#### **IV. EVALUATION OF MERCURY-CONTAINING EQUIPMENT UNDER THE REGULATORY ASSESSMENT FACTORS**

This section of the Petition evaluates mercury-containing equipment under the factors set forth in 40 C.F.R. § 273.81, which are to be used by EPA in determining whether a waste or category of waste warrants inclusion in the Part 273 program. See 40 C.F.R. § 273.80(b), (c). In making this assessment, EPA has made clear that it will not disqualify a waste from inclusion in the Part 273 program merely because every factor in section 273.81 is not addressed in a petition. 60 Fed. Reg. at 25511. Rather, EPA is operating under a "weight of the evidence standard." In rendering a decision whether to add a new waste to the Part 273 program, EPA will use the factors listed in section 273.81 and will "grant or deny a petition . . . based on the weight of evidence showing that regulation under 40 C.F.R. Part 273 is appropriate for the waste or

category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program." 40 C.F.R. § 273.80(c). Thus, as EPA explained in the final universal waste rule, "a waste that several of the factors [under section 273.81] demonstrate very strongly would accomplish the Agency's goals may be more likely to be added to the universal waste system than a waste that all of the factors weakly support." 60 Fed. Reg. at 25511.

Pursuant to this standard, USWAG evaluates mercury-containing equipment under the most relevant factors set forth in section 273.81. In addition, USWAG proposes a definition for mercury-containing equipment and recommends associated Part 273 management standards that will ensure that mercury-containing equipment is managed in a manner that is protective of human health and the environment.

**A. Proposed Definition**

"Mercury-containing equipment" means "any device or instrument, with the exception of batteries and thermostats, that contains metallic mercury as a component necessary for its operation. Examples of such equipment include: thermometers, manometers, barometers, regulators, meters, gauges, switches, and relays."

**B. Applicability of Universal Waste Factors under 40 C.F.R. § 273.81**

- i. **§ 273.81(a) -- "The waste or waste category, as generated by a wide variety of generators, is a listed hazardous waste or, if not listed, a proportion of the waste or waste category exhibits a hazardous waste characteristic."**

Discarded mercury-containing equipment is widely generated by an array of manufacturing industries, utilities, municipalities and domestic households that make use of pressure measuring instrumentation, meters or equipment such as thermometers, barometers and manometers. In addition, mercury also has been used



as an electric conductor and is often contained in regulators, switches and relays. Although mercury-containing equipment is being replaced in many applications with electrically-driven equipment, such equipment remains widely used and continues to be generated as a wastestream on a sporadic basis.

The amount of mercury contained in this equipment varies substantially. For example, a few pieces of equipment such as some large manometers may contain over 200 pounds of mercury. However, the vast majority of mercury-containing equipment, including switches, relays and regulators, generally contains only a few grams of mercury. See Attachment B.

Discarded mercury-containing equipment that fails the TCLP toxicity level for mercury of 0.2 mg/l is classified as a D009 characteristic hazardous waste. 40 C.F.R. § 261.24. EPA itself has long recognized that used commercial items containing mercury may exhibit a hazardous characteristic. See 58 Fed. Reg. at 8109. See also Attachment A ("Based on our understanding of this material, we believe that when removed from service, natural gas regulators containing mercury best meet the definition of a spent material. . . . Therefore, the regulators are solid wastes and hazardous waste when sent for reclamation."). However, for certain types of mercury-containing equipment, the question of whether a device is hazardous is the subject of some confusion. For example, switches and relays generally contain very small amounts of mercury and whether the entire device will fail the TCLP test will vary on a case-by-case basis.

- ii. **§ 273.81(b) -- "The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses,**

**government organizations, as well as large industrial facilities."**

As discussed above, mercury-containing equipment is not unique to any one industry or application, but instead has numerous commercial, industrial, municipal and domestic uses. As a result, any of the numerous and diverse sources that use mercury-containing equipment are potential generators of this wastestream, which means that this material is generated across a wide spectrum of industrial, commercial and municipal interests.

- iii. **§ 273.81(c) -- "The waste or category of waste is generated by a large number of generators (e.g., more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator."**

Due to the number of different applications for mercury-containing equipment, there are hundreds of thousands of potential generators and points of generation for this wastestream. The amount of waste instrumentation generated by a given source will obviously vary according to the source and the type of equipment at issue. In addition, mercury-containing wastes are typically generated on a sporadic basis in relatively small quantities since equipment failures tend to be infrequent and unpredictable. USWAG estimates that a single individual mid-sized electric utility generates on an annual basis approximately 2000 - 4000 pieces of mercury-containing equipment, including regulators, switches, temperature probes, manometers, barometers and other types equipment identified above. See Attachment B.

- iv. **§ 273.81(d) -- "Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste."**

As discussed below in "Suggested Management Standards for Mercury-Containing Equipment," USWAG proposes that EPA develop Part 273 management

standards for Mercury-Containing Equipment that are comparable to those already in place for mercury-containing thermostats. These measures will ensure the close stewardship of the wastestreams and will minimize any potential threat to human health or the environment.

- v. **§ 273.81(e) -- "The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (e.g., waste management requirements appropriate to be added to Part 273 and/or applicable Department of Transportation requirements) would be protective of human health and the environment during accumulation and transport."**

Although this wastestream may exhibit the toxicity characteristics for mercury, the risk posed by it is low in comparison to other hazardous wastes. EPA already has included mercury-containing thermostats within the universal waste system. In fact, there is little substantive difference between additional types of mercury-containing instruments and mercury-containing thermostats in terms of their suitability for regulation as universal waste, and the manner in which they can be safely handled, stored and recycled.

In addition, mercury-containing equipment is generated in relatively small amounts and the elemental mercury contained in such equipment is fully enclosed within the instrument. As a result, the danger of spillage or leakage during removal and transportation is minimal, and the corresponding risk of harm to human health and the environment also is low. In addition, application of the existing Part 273 management standards for mercury-containing thermostats to mercury-containing equipment generally will ensure that the equipment is handled and transported safely. For instance, the waste specific management standards proposed by USWAG will ensure

that (1) the equipment is accumulated only in qualified containers; (2) all containers are properly labeled and marked; (3) all spills are responded to immediately; and (4) storage does not exceed specified time limits. The universal waste requirements for employee training, tracking of shipments, notification and management also would be applicable, thereby ensuring proper management.

- vi. **§ 273.81(f) -- "Regulation of the waste or category of waste under 40 C.F.R. Part 273 will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (e.g., the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems) to recycling, treatment, or disposal in compliance with Subtitle C of RCRA."**

Because of the burdens associated with the RCRA subtitle C program, waste handlers may attempt to differentiate between the hazardous and non-hazardous portions of this wastestream. However, differentiation is complicated by the difficulties involved with sampling. For mercury-containing equipment, it is difficult to determine how a device should be sampled and it is difficult to obtain agreement from regulatory agencies on whether sampling and analysis have been conducted properly.

If designated as a universal waste, many waste handlers will forego efforts to differentiate between hazardous and non-hazardous portions of this waste. As a result, potentially large portions of this wastestream that have been managed in non-hazardous waste system would be managed in accordance with the Part 273 program. This would result in the management of mercury-containing equipment in a more environmentally protective manner. In addition, by providing a reliable and cost effective means by which mercury-containing equipment can be accumulated and disposed, EPA will encourage parties to make use of the universal waste system. Currently, the recycling of mercury-containing in equipment is an expensive proposition

that is made more difficult by the need to accumulate sufficient quantities of material in order to make recycling cost effective.

As discussed previously, like thermostats, many other types of instrumentation contain elemental mercury that could be recycled if collected in sufficient quantities. It makes little sense to establish a streamlined system to collect mercury-containing thermostats, while leaving similar types of mercury-containing equipment outside of the system. In fact, by including additional types of equipment in this category, recycling would be further encouraged since more material would be available to promote the development of the recycling industry for the removal of elemental mercury and the recycling of scrap metal from mercury-containing equipment. As a result, potentially large volumes of instruments would be diverted from potential disposal in the nonhazardous wastestream.

In this regard, regulation of mercury-containing equipment under the Part 273 program will help to draw wastes out of the municipal solid wastestream and into the universal waste system. As EPA itself recognized in the final universal waste rule, "as an infrastructure develops for protectively handling these wastes [under the Part 273 program], CESQG waste is most likely to be incorporated into the universal waste system . . . ." 60 Fed. Reg. at 25510.

This is especially true here. Currently, waste handlers interested in consolidating large volumes of CESQG waste must obtain a RCRA permit if their collection efforts involve the accumulation of more than 1,000 kilograms of CESQG waste for more than 180 days. See 40 C.F.R. § 261.5(g)(2). The prospect of obtaining a RCRA permit for the central collection of large quantities of CESQG waste prior to subtitle C management makes this option extremely impractical under the current RCRA regulations. The inclusion of mercury-containing equipment in Part 273 would eliminate this impediment and would provide CESQGs with the option of

accumulating sufficient volumes of qualifying wastes to facilitate proper disposal. Thus, mercury-containing equipment qualifying as CESQG wastes that have been traditionally managed outside of the subtitle C system will be drawn out of the municipal wastestream and managed more appropriately in treatment or disposal facilities under the Part 273 program.

**vii. § 273.81(g) -- "Regulation of the waste or category of waste under 40 C.F.R. Part 273 will improve the implementation of and compliance with the hazardous waste regulatory program."**

As discussed above in section II, the inclusion of mercury-containing equipment in the Part 273 program will greatly simplify the accumulation and transportation of this waste category, thus improving existing waste management practices by facilitating collection activities and ensuring more cost-effective and across-the-board compliance with applicable RCRA requirements. More fundamentally, the inclusion of mercury-containing equipment in Part 273 also will improve compliance with the hazardous waste regulatory program.

Currently, strict compliance with all applicable Subtitle C requirements for these wastes is extremely difficult and often impractical, because, as explained above, the existing regulatory structure is based on the RCRA paradigm of a single generator location, rather than the widely dispersed, multiple generator scenario characteristic of the generation of mercury-containing equipment. Thus, many of the existing RCRA requirements (e.g., obtaining generator identification numbers and conducting waste categorizations at each generation point) are not suited to real world situations involving mercury-containing equipment. This makes strict compliance with these requirements impractical, if not impossible. By applying rules developed under Part 273 to mercury-containing equipment, management requirements would be more attuned to the

realities of the generation of this wastestream, thereby making compliance more sensible and achievable.

**viii. § 273.81(h) -- "Such other factors as may be appropriate in determining whether the waste or category of waste warrants inclusion in the Part 273 program."**

Based on the above discussion, it is clear that the most logical and practical method for managing mercury-containing equipment is under the Part 273 universal waste system. The currently regulatory regime poses an array of practical and regulatory dilemmas. Under the current system, electric utilities, municipalities and other entities that generate mercury-containing equipment are required to treat each point at which this waste is generated as an individual EPA generator, a situation which presents tremendous logistical problems and is entirely unnecessary.

The Part 273 program provides the necessary degree of flexibility required to accumulate and transport mercury-containing equipment under a practical and environmentally sound program, while ensuring that such practices are conducted in a manner that is fully protective of human health and the environment.

**C. Suggested Management Standards for Mercury-Containing Equipment**

USWAG proposes management standards for mercury-containing equipment that will ensure that the waste is managed in a manner that will assist in preventing the release of the waste or any component of the waste into the environment. Under this proposal, mercury-containing equipment would be regulated in the same manner as universal waste thermostats. See 40 C.F.R. §§ 273.13(c) and 273.33(c).

In the case of mercury-containing equipment, the equipment could be handled in accordance with the management standards approved by EPA for universal waste thermostats. The mercury-containing portion of the equipment would be removed in

compliance with the requirements of 40 C.F.R. § 273.13(c)(2) or 273.33(c)(2).

Equipment that shows evidence of leakage or damage that could result in leakage would be placed in a container that is closed, structurally sound and lacks any evidence of leakage, spillage or damage. *Id.* §§ 273.13(c)(1) and 273.33(c)(1).

In addition, USWAG suggests that mercury-containing equipment be subject to all of the other applicable provisions of the universal waste program. All containers, tanks or vehicles containing mercury-containing instruments would be required to be labeled or marked. *Id.* §§ 273.14 and 273.34. Such waste could not be accumulated for longer than one year from the date of generation, unless the sole purpose of the accumulation is to facilitate proper recovery, treatment or disposal. *Id.* §§ 273.15 and 273.35. Handlers of mercury-containing equipment would be required to comply with the provisions regarding employee training (*id.* §§ 273.16 and 273.36), response to releases (*id.* §§ 273.17 and 273.37), off-site shipment (*id.* §§ 273.18 and 273.38), tracking of shipments (*id.* §§ 273.19 and 273.39) and exports (*id.* §§ 273.20 and 273.40). Finally, the existing requirements for universal waste transporters (Part 273, subpart D), destination facilities (Part 273, subpart E), and importers (Part 273, subpart F) would be applicable. Compliance with these standards will ensure that the wastestream is handled in an environmentally protective manner.

## **V. CONCLUSION**

As demonstrated by this petition, the addition of mercury-containing equipment is fully consistent with the objectives of the universal waste program. Therefore, USWAG respectfully requests that EPA include mercury-containing equipment in the federal universal waste program under 40 C.F.R. Part 273.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JUL 29 1994

9442.1994(06)

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Ms. Karen Sahler  
Environmental Committee  
New York Gas Group  
500 Fifth Avenue  
Suite 428  
New York, New York 10110-0469

Dear Ms. Sahler:

In your letter to Michael Shapiro of May 17, 1994 you requested EPA assistance in determining the regulatory status of natural gas regulators that contain mercury under the Resource Conservation and Recovery Act (RCRA).<sup>1</sup> You write that you believe that these regulators meet the definition of a scrap metal.<sup>1</sup> You also correctly point out that scrap metal is exempt from regulation when reclaimed. 40 CFR §261.6(a)(3)(iii). You have asked EPA whether natural gas regulators meet the definition of a scrap metal so that NYGAS members would not have to manage these materials as solid wastes and hazardous wastes when sent for reclamation.

EPA cannot concur with this interpretation. Since your letter states that the natural gas regulators contain mercury, these regulators cannot be scrap metal. When EPA revised the definition of solid waste in 1985, it created a new category of secondary material in the final rule, scrap metal. 50 FR 614, 624 (January 4, 1985). In setting up this new category, EPA stated "Materials not covered by this term include...*liquid metal wastes (i.e., liquid mercury)* [emphasis added]...." 50 FR at 624. The argument that the regulator taken as whole unit is mostly metal and does not contain a "significant liquid component" is inapplicable here. In general, any quantity of liquid mercury other than trace amounts attached to or contained in a spent material precludes that material from being a scrap metal.

In addition, EPA agrees with the New York State position that used equipment of this type cannot be considered to be a commercial chemical product. Based on our understanding of this material, we believe that when removed from service, natural gas regulators containing mercury best meet the definition of a spent material. 40 CFR §261.1(c)(1). Therefore, the regulators are solid wastes and hazardous wastes when sent for reclamation. 40 CFR §261.2(c)(3). These natural gas regulators would be subject to applicable RCRA Subtitle C regulations, 40 CFR Parts 262-265, 268 and 270.

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<sup>1</sup> "Scrap metal" is bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars) which when worn or superfluous can be recycled. 40 CFR §261.1(c)(6).



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Although these mercury-bearing natural gas regulators cannot be regulated as scrap metal, the natural gas regulator may meet the definition of a scrap metal and be exempt from regulation once the mercury component is removed from the regulator (provided it does not contain other liquids and otherwise best meets the definition of scrap metal). Also, you may wish to consider petitioning the Agency to include these regulators as part of the proposed Part 273 Special Collection System regulations when these regulations become final. If included in the Part 273 regulations, these regulators could be shipped under reduced Subtitle C regulatory requirements (e.g., a manifest would not be required). EPA requested comment on the potential usefulness of Part 273 regulations to mercury-containing thermostats in the proposed rule. 58 FR 8102, 8110 (February 11, 1993).

Please be aware that under Section 3006 of RCRA (42 U.S.C. Section 6926) individual States can be authorized to administer and enforce their own hazardous waste programs in lieu of the Federal program. When States are not authorized to administer their own program, the appropriate EPA Regional office administers the program and is the appropriate contact for any case-specific determinations. Please also note that under Section 3009 of RCRA (42 U.S.C. Section 6929) States retain authority to promulgate regulatory requirements that are more stringent than Federal regulatory requirements.

I hope that this letter sufficiently responds to your questions and concerns. If you have any further questions or comments, please contact Paul Borst of my staff at (202) 260-6713.

Sincerely,

A handwritten signature in dark ink, appearing to read "D. Bussard", with a stylized flourish at the end.

David Bussard, Director  
Characterization and  
Assessment Division

**TABLE 1**  
**1996 MERCURY POLLUTION PREVENTION PROJECT**  
**ELECTRIC BUSINESS**

Mercury Sources and Quantity Estimations

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
<b>A. HYDRO-ELECTRIC PLANTS</b>				
	Temperature Gauges	4	-	0.094
	Mercury Switches	2	-	0.125
	Penstock Level Alarm Switches	3	-	0.187
	Station Battery Thermometers	3	-	0.094
	HW/Hi-Low Water Switch	8	-	0.25
	Thermometer	1	-	0.030
	Thermostat	1	-	0.031
	Station Battery Thermometers	2	-	0.031
	Flow Switch-Retired	1	-	0.31
	Sump Pump Alarm Switches (1 Retired)	2	-	0.06
	Thermometer	1	-	0.031
	Penstock Low-Water Switches	2	-	0.062
	Heating Thermostat	1	-	0.031
	Battery Temperature Gauge	1	-	0.031

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Mercoid Control Switches	3	-	0.125
	HW/Hi-Low Water Trip Switch	6	-	0.19
	Exhaust Fan Thermostat and Thermometer	1	-	0.031
	Battery Bank Thermometers	2	-	0.031
	Thermostat Thermometers	2	-	0.031
	Hi-Pressure Air Switch	1	-	0.031
	Thermostat	1	-	0.031
	Thermostats (MG Sets)	3	-	0.094
	Spare Thermostats (MG Sets)	2	-	0.062
	HW Gauge (6 Mercury Tubes)	1	-	0.375
	Temperature Gauges	3	-	0.093
	Thermometers	2	-	0.062
	Mercoids	5	-	0.312
	<b>Turbine Gauge Board:</b>			
	Mercoid Switches	12	0.008	0.096
	Flow Switches	24	0.008	0.192
	<b>Actuator Cabinet:</b>			
	Pressure Switches	30	0.008	0.240
	Echelon Control Lead N Lag Switches	6	0.008	0.048
	Brake Switch Compartment	12	0.008	0.096
	Turbine Oil Guide Temperature Switch	6	0.008	0.048
	Level Switch Alarm	6	0.008	0.048
	Generator Motor Heater Temperature Switch	6	0.008	0.048

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Track Rack Alarm Switch	3	0.008	0.024
	Domestic Water Supply Switch	2	0.008	0.016
	Land Water Seal	1	0.008	0.008
	Cooling Water Heater Switch	5	0.008	0.040
	House Service Air Switch	1	0.008	0.008
	Depressing Air System Switch	3	0.008	0.024
	Cardox Fires System Switch	42	0.008	0.336
	Stock Switches	2	0.008	0.016
	HAVC Thermometers	22	0.007	0.154
	#2 Bearing Oil Temperature Thermometer	1	-	0.031
	Battery Thermometer	1	-	0.031
	Mercoid #1 Governor	1	-	0.062
	Mercoid #2 Governor	1	-	0.062
	Mercoids	5	-	0.031
	Weather Station Thermometer	1	-	0.031
	HW/LW Water Float Switch	1	-	0.062
	HW Gauge (Retired/In Storeroom)	1	-	0.37
	Thermometers	6	-	0.19
	Mercury Switches	3	-	0.125
	Mercury Switches	10	-	0.062
	Thermometers	8	-	0.25
	<b>Subtotal</b>			<b>6.14</b>
<b>B. FOSSIL PLANTS</b>				
	Magnetrol Switches	35	-	0.270

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Mercoid Switches	105	-	0.809
	Chemistry Thermometers	7	-	0.046
	Feedwater Transmitter	1	-	0.007
	Chemistry Lab Waste Mercury in Container	1	-	38.85
	Instrument and Control Lab Squeeze Bottles	2	-	18.91
	<b>Subtotal</b>			<b>58.89</b>
	Magnetrol Switches	69	-	0.532
	Forney Burner Management Wetted Relays	107	-	0.707
	Balance of Plant Wetted Relays	50	-	0.330
	Feeders Wetted Contracts	8	-	0.053
	Chemistry Thermometer	18	-	0.119
	Chemistry Lab Waste Mercury in Container	1	-	2.67
	I and C Lab Manometer	1	-	7.28
	I and C Lab Bottle of Mercury	1	-	24.28
	Mercoid Switches	29	-	0.224
	EHC Cabinet Wetted Relays	250	-	1.65
	<b>Subtotal</b>			<b>37.84</b>
	Thermostat Wetted Switches	4	-	0.026
	<b>Subtotal</b>			<b>0.026</b>
	Results Lab Manometer	2	-	14.57
	Results Lab Bottle of Mercury	1	-	145.68
	<b>Subtotal</b>			<b>160.25</b>

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Turbine Back-Pressure Manometers			10
	Thermometers (Stock)	42	0.007	0.294
	Thermostats (Stock)	4	0.007	0.028
	Pressure Switches (Stock)	12	0.008	0.096
	Limit Switches (Stock)	20	0.008	0.160
	<b>Subtotal</b>			<b>10.58</b>
	Ring Balances			40.0
	<b>Manometers</b>			
	Back-Pressure Manometers			45.0
	Water Conditioning			
	Flow Meters			15.0
	<b>Mercoird Switches</b>			10.0
	Control Room Switch			
	House Water Control			
	Oil Back-Up System			
	Water Conditioning			
	Transmitter Rack			
	I&C Lab Storage			170
	Timers (Stock)	57		3.26
	Relays	2		0.079
	<b>Subtotal</b>			<b>283.33</b>
	Switches (in service/use)			
	Thermometers (in service/use)	112	30	7.40
	Switches (in stock)	16		0.16
	Relays (in stock)	26	0.022-0.066	1.32
		15	0.066	0.99

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Timers (in stock)	23	0.044-0.066	1.50
	Gauges (in stock)	1	0.066	0.066
	Thermostats (in stock)	1	0.011	0.011
	Thermometers (in stock)	2	0.011	0.022
	<b>Subtotal</b>			<u>11.47</u>
	Miscellaneous Switches, Meters, Thermometers, Thermostats, etc., all in Units 7&8 Only			<u>59.0</u>
	<b>Subtotal</b>			<u>59.0</u>
	<b>Chem Lab</b>			
	Manometer (in use)	1	0.38	0.38
	Thermometers (in use)	12	0.007	0.084
	Mercoid Switch Vials (in storage)	15	0.083	1.26
	Mercury in Bottles (in storage)	5	20	100
	<b>I &amp; C Lab</b>			
	Manometer (U-Tube, 1/4 inch by 30 inches)	1	0.75	0.75
	Repair Equipment for Flowmeters/Ring Balances	6	5	30
	<b>Plant - In-Service</b>			
	Ring Balances	6	8	48
	Various Mercoid Switches	50	0.084	4.20
	Thermometers	12	0.007	0.084



Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Small (1/2-Size) Thermometers	14	0.0035	0.049
	Small-Turbine Thermometers	30	0.0035	0.105
	Flow Meters (Cooling Water Temperature Control)	9	8	72
	Drum-Level Meters	3	8	24
	Back-Pressure Manometer	1/4 cup	1.83	1.83
	Hydrogen Cooler Thermometers (in and out)	28	0.007	0.20
	Exactel Manometer (12 ft x 2 inch diameter)	1	229	229
	Fixed Water Flow Meters	3	38	114
	<b>Fuel Handling</b>			
	Mercoid Switches	20	0.084	1.68
	<b>Subtotal</b>			<b>627.62</b>
<b>C. NUCLEAR PLANTS</b>				
	Switches (Various)	135	0.0078	1.053
	Flow Transmitter	1	6.5	6.5
	Stack Tube Manometer	5	6.5	15.0
	Barometer/Manometer Set Up	1	3.0	9.0
	Stock	-	9.0	20.0
	<b>Subtotal</b>			<b>51.55</b>
	Level Switches	68	0.022	1.50
	Pressure Switches (in use)	44	0.022	0.97
	Pressure Switches (in stock)	5	0.022	0.11
	Mercury Valve Relays (in stock)	8	0.066	0.53
	Mercury Switches (in stock)	30	0.041	1.23
	Thermometers (in use)	20	0.030	0.60

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Thermometers (in stock)	20	0.030	0.60
	Manometers	4	7.71	30.83
	<b>Subtotal</b>			<u>36.37</u>
<b>D. PEAKER PLANTS</b>				
	Manometers	3	0.062	0.186
	Manometer	1	0.062	0.062
	None	-	-	-
	1 Pint of Mercury	1	14.6	14.6
	Manometers	2	0.062	0.124
	None	-	-	-
	None	-	-	-
	<b>Subtotal</b>	-	-	<u>15.0</u>
<b>E. ELECTRIC SERVICE CENTERS (STATEWIDE-27)</b>				
	Miscellaneous Equipment (Meters, Switches, etc.)	-	-	22.5
	Customer Thermostats	22	0.007	0.15
	<b>Subtotal</b>			<u>22.65</u>
<b>F. ELECTRIC TRANSMISSION SYSTEM (STATEWIDE)</b>				
	Timers (Adlake)	788	2.5	314
	Aux. Relay (SNW)	400	0.062	25
	Aux. Relay (Carrier)	300	0.062	19

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Thermostats (Misc)	150	0.060	9
	Subtotal			368
G. DISTRIBUTION				
SUBS (STATEWIDE-900)				
	Thermostats (Old Style)	Very Few	-	<8
	Subtotal			<8
	TOTAL			1755

**TABLE 2**  
**1996 MERCURY POLLUTION PREVENTION PROJECT**  
**GAS BUSINESS**

Mercury Sources, Quantity Estimations and Existing Disposition Methods

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
<b>A. PRODUCTION PLANTS</b>				
	Thermostat	1	0.0067	0.007
	Plastic Bottle (Storage) for Flow Meter Calibration	1	5.0	5.0
	Main Office Thermostats	5	0.0067	0.033
	Service Building Thermostats	1	0.0067	0.007
	Auxiliary Building Thermostats	2	0.0067	0.013
	No Sources Reported			
	Thermostats	6	0.0067	0.040
	Thermometers	6	0.0067	0.040
	Limit Switch	5	0.0078	0.039
	Manometer	1	0.062	0.062
	Storage Bottle	1	0.125	0.125
	Flow Meters	23	8.0	184.0
	Spare Meter (Back Room)	1	8.0	8.0

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	PO-1 Meter	1	8.0	8.0
	Storage Barn Meters	6	8.0	48.0
	Back Room Hazardous Storage			39.0
	<b>Subtotal</b>			<u>292.4</u>
<b>B. GAS PLANTS/ COMPRESSOR STATIONS</b>				
	Mercury Switch	100	0.0078	0.78
	Mercury Thermometer	48	0.0067	0.322
	Industrial Thermometer	30	-	0.179
	Manometer (Lab)	2	-	2.57
	Mercuric Chloride (Lab Reagent)	-	-	0.25
	Mercuric Nitrate (Lab Reagent)	-	-	0.25
	Nessler's Reagent (Lab)	-	-	0.018
	Hydrometer With Thermometer	1	-	0.033
	Recyclable "Dirty" Hg Metal	-	-	4.00
	No Sources Reported			
	Loft Area Pressure Switch	1	0.125	0.125
	Control Room Thermostat	1	0.0067	0.007
	Welding Air Thermostat	1	0.0067	0.007
	Lunch Room Thermostat	1	0.0067	0.007
	Auxiliary Building Pressure Switch (Air Comp)	2	0.125	0.125

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Engine Building Engine Pressure Switch	10	0.125	1.25
	Paint Building Pressure Switch (in Stock)	2	0.125	0.250
	Paint Building Temperature Switch (in Stock)	2	0.125	0.250
	Paint Building Manometer	1	1.0	1.0
	No Sources Reported			
	Switches (Various)	200	0.0078	1.56
	Thermostats	12	0.0067	0.080
	Auxiliary Room Generator Manometer	1	0.062	0.062
	Engine #5 Manometer	1	0.062	0.062
	Auxiliary Room Pressure Switch	3	0.0078	0.023
	Engine Room Pressure Switch	3	0.0078	0.023
	Dehydration Unit Pressure Switch	3	0.0078	0.023
	Parts Storage Building Pressure Switch	1	0.0078	0.008
	Engines 1-4 Oil Level Switches	4	0.0078	0.031
	Dehydration Area Level Switches	1	0.0078	0.008
	Overhead Oil Tank Level Switch	1	0.0078	0.008
	Test Thermometers	3	0.0067	0.020
	Engines 1-4, Water Temperature	5	0.0067	0.033
	Engine Room on Beam, Engine 1	1	0.0067	0.007
	Weather Enclosure	1	0.0067	0.007
	Thermostat/Thermometer	6	0.0067	0.040
	Office Thermostats	3	0.0067	0.020

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Shunt Trips	6	0.0078	0.047
	Seal Oil Level Switches	8	0.0078	0.062
	Fuel Gas Pressure Switch	1	0.0078	0.008
	Power Gas Pressure Switch	2	0.0078	0.016
	Pilot Gas Pressure Switch	6	0.0078	0.047
	C1-2R Manifold Pressure Manometer	1	4.0	4.0
	CR-3R Manifold Pressure Manometer	1	4.0	4.0
	PSC 1069	1	0.0078	0.008
	PSC 2069	1	0.0078	0.008
	Foxboro Chart Recorders	2	2.0	4.0
	Flowmeters	8	8.0	64.0
	Gas After-Cooler Temperature Switch	5	0.0078	0.039
	Thermostats	8	0.0067	0.054
	Gas After-Cooler Controls	13	0.0625	0.812
	Turbine Seal Oil Level Switch	6	0.0078	0.047
	Pilot Gas Low-Pressure Switch	2	0.0078	0.016
	Fire Gate Latch Switch	2	0.0078	0.016
	Fire Gate Power Trip Switch	2	0.0078	0.016
	Power Gas Low-Pressure Switch	8	0.0078	0.062
	Turbine Oil High-Temperature Switch	2	0.0078	0.016
	Plant 1 Water Tank Pressure Switch	1	0.0078	0.008
	Hot Water Boiler Temperature Switch	2	0.0078	0.016
	Air Receiver Pressure Switch	1	0.0078	0.008
	1-1 Cooler Temperature Switch	2	0.0078	0.016
	1-2 Cooler Temperature Switch	2	0.0078	0.016

**TABLE 3**  
**1996 MERCURY POLLUTION PREVENTION PROJECT**  
**GENERAL SERVICES**

Mercury Sources, Quantity Estimations and Existing Disposition Methods

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
<b>A. GENERAL OFFICE FACILITIES</b>				
	Thermometers	6	0.0067	0.040
	Thermostats	9	0.0067	0.060
	Limit Switches	3	0.0078	0.023
	<b>Subtotal</b>			<u>0.123</u>
	Thermometers	26	0.0067	0.174
	<b>Subtotal</b>			<u>0.174</u>
	Thermometers	3	0.0067	0.020
	Thermostats	7	0.0067	0.047
	Unit Switches	3	0.0078	0.023
	Pressure Switches	2	0.0078	0.016
	<b>Subtotal</b>			<u>0.106</u>
	Thermometers	5	0.0067	0.033
	Thermostats	44	0.0067	0.294
	Limit Switches	10	0.0078	0.078



Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	Emergency Shutdown Power Gauge System	3	0.0078	0.023
	1-3 Turbine Area Switch	1	0.0078	0.008
	1-4 Turbine Area Switch	1	0.0078	0.0081
	Plant 2 Air Dryer Bypass	1	0.0078	0.008
	Plant 2 Air Receiver Pressure Switch	1	0.0078	0.008
	Plant 2 Fire System Alarm Switch	4	0.0078	0.031
	2-13 Pressure and Temperature Alarm Shutdown	4	0.0078	0.031
	2-14 Pressure and Temperature Alarm Shutdown	4	0.0078	0.031
	2-2 Turbine Area Switch	1	0.0078	0.008
	2-3 Turbine Area Switch	1	0.0078	0.008
	Switches in Stock	8	0.0078	0.062
	Thermostats	35	0.0067	0.235
	<b>Subtotal</b>			<b>91.4</b>
<b>C. GAS SERVICE CENTERS (STATEWIDE 20)</b>				
	Mercury Regulators	2000	0.44	875
	Miscellaneous Equipment (Meters, Switches, etc.)	-	-	22.5
	Customer Thermostats	23	0.007	0.16
	<b>Subtotal</b>			<b>898</b>
	<b>TOTAL</b>			<b>1281.8</b>

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	<b>Subtotal</b>			0.405
	Thermometers	14	0.0067	0.094
	Thermostats	200	0.0067	1.34
	Unit Switches	22	0.0078	0.172
	<b>Subtotal</b>			1.61
	No Sources Reported			
	No Sources Reported			
	No Sources Reported			
	Barometer	1	5.5	5.5
	Barometer	1	3.0	3.0
	Stokes Gauges	2	1.0	2.0
	Mercury-Sealed Piston	4	<0.06	<0.06
	Liquid Glass Thermometers	50	-	0.5
	Mercury Fix Point	1	6.5	6.5
	Mercury Stock	1	26.0	26.0
	Thermocouple Junctions	2	0.0078	0.016
	<b>Subtotal</b>			43.5
	Transformer Gas Extraction Apparatus	1	18.5	18.5
	Thermometers	60	-	0.6
	PCB Spill Clean-Up Kit	1	2.0	2.0
	Metal/Steel Blue Canisters	3	-	30.0
	<b>Subtotal</b>			51.1

Facility	Mercury Sources	Quantity	Individual Weight (lbs)	Total Weight (lbs)
	No Sources Reported			
	<b>TOTAL</b>			97.0